

In the Claims:

Please amend the claims as follows:

1. (Currently amended) An inverter system for driving a poly-phase motor, the system comprising:
 - an alternating current motor which is driven by an inverter for outputting drive force or generating power;
 - a power supply connected to a neutral point of the alternating current motor; and
 - neutral point state detecting means for detecting a state of current or voltage at the neutral point, and
 - control means for determining an abnormality caused by disconnection of the power supply from the neutral point,wherein the abnormality determination is performed based on the detection result of the neutral point state detecting means.
2. (Original) An inverter system according to claim 1, wherein the neutral point state detecting means detects ripples of voltage at the neutral point.
3. (Previously presented) An inverter system according to claim 1, wherein
 - an auxiliary electrical device that consumes electrical power is connected to the power supply, and
 - the neutral point state detecting means detects ripples of current supplied to the auxiliary electrical device.

4. (Previously presented) An inverter system according to claim 2, wherein

abnormality is determined when the ripples detected by the neutral point state detecting means are equal to or greater than a predetermined value.

5. (Previously presented) An inverter system according to claim 1, wherein

a reactor is connected between the neutral point and the power supply, and

the neutral point state detecting means detects a state of current or voltage on the side of the power supply with respect to the reactor.

6. (Currently amended) An abnormality detecting method in an inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter and generates power, and a power supply connected to a neutral point of the alternating current motor, wherein comprising determining an abnormality resulting from disconnection of the power supply from the neutral point by detecting a state of current or voltage at the neutral point is detected, and performing the abnormality determination is performed based on the detection result.

7. (Currently amended) An abnormality detecting program in an inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter and generates power, a power supply connected to a neutral point of the alternating current motor, and an

abnormality detecting apparatus for monitoring current or voltage of the neutral point, ~~wherein~~ comprising:

the abnormality detecting program ~~causes~~ causing the abnormality detecting apparatus to capture a state of current or voltage at the neutral point and perform an abnormality determination to detect an abnormality resulting from disconnection of the power supply from the neutral point based on the captured state.

8. (Currently amended) An inverter system for driving a poly-phase motor, ~~an abnormality detecting method for the poly-phase motor driving inverter system or an abnormality detecting program for the poly-phase motor driving inverter system~~ according to claim 1, wherein

the alternating current motor is an alternating current motor used for a vehicle.

9. (Original) An inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter for outputting drive force and generating power and a power supply connected to an neutral point of the alternating current motor, the power supply being charged by power generated by the alternating current motor and supplying electrical power to a plurality of electrical devices, the inverter system comprising:

power supply line voltage detecting means for detecting voltage on a power supply line to which the power supply is connected; and

power supply current detecting means for detecting current of the power supply, wherein

during normal operation, the inverter is controlled in accordance with an output of the power supply line voltage detecting means, and

when it is determined that the power supply line voltage detecting means is operating abnormally, the inverter is controlled in accordance with an output of the power supply current detecting means.

10. (Original) An inverter system according to claim 9, wherein in the event of an abnormality in the power supply line voltage detecting means, control is performed such that the power supply current becomes 0 in accordance with the output of the power supply current detecting means.

11. (Original) An inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter for outputting drive force and generating power and a power supply connected to a neutral point of the alternating current motor, the power supply being charged by power generated by the alternating current motor and supplying electrical power to a plurality of electrical devices, the inverter system comprising:

power supply line voltage detecting means for detecting voltage on a power supply line to which the power supply is connected; and

neutral point current detecting means for detecting neutral point current which is input and output with respect to the neutral point of the alternating current motor, wherein

during normal operation, the inverter is controlled in accordance with an output of the power supply line voltage detecting means, and

when the power supply line voltage detecting means is operating abnormally, the inverter is controlled in accordance with an output of the neutral point current detecting means.

12. (Original) An inverter system according to claim 11, wherein the neutral point current detecting means detects current of each of three phases of the alternating current motor, and detects the neutral point current based on the detected values.

13. (Original) An inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter for outputting drive force and generating power and a power supply connected to a neutral point of the alternating current motor, the power supply being charged by power generated by the alternating current motor and supplying electrical power to a plurality of electrical devices, the inverter system comprising:

power supply line voltage detecting means for detecting voltage on a power supply line to which the power supply is connected, and wherein

during normal operation, the inverter is controlled in accordance with an output of the power supply line voltage detecting means, and

when the power supply line voltage detecting means is operating abnormally, the inverter is controlled in accordance with a neutral point voltage command corresponding to a target voltage of the power supply.

14. (Original) An inverter system according to claim 13, wherein the neutral point voltage command is corrected base on at least one of revolution of the alternating current motor, an output torque command, and inverter input side voltage.

15. (Original) A control method of an inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by

an inverter for outputting drive force and generating power and a power supply connected to a neutral point of the alternating current motor, the power supply being charged by power generated by the alternating current motor and supplying electrical power to a plurality of electrical devices, wherein

during normal operation, the inverter is controlled in accordance with voltage of a power supply line to which the power supply is connected, and in the event of abnormality in sensing of the power supply line voltage, the inverter is controlled in accordance with current of the power supply.

16. (Original) A control method of an inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter for outputting drive force and generating power and a power supply connected to a neutral point of the alternating current motor, the power supply being charged by power generated by the alternating current motor and supplying electrical power to a plurality of electrical devices, wherein

during normal operation, the inverter is controlled in accordance with voltage of a power supply line to which the power supply is connected, and in the event of abnormality in sensing of the power supply line voltage, the inverter is controlled in accordance with current of the neutral point.

17. (Original) A control method of an inverter system for driving a poly-phase motor comprising an alternating current motor which is driven by an inverter for outputting drive force and generating power and a power supply connected to a neutral point of the alternating current motor, the

power supply being charged by power generated by the alternating current motor and supplying electrical power to a plurality of electrical devices, wherein

during normal operation, the inverter is controlled in accordance with voltage of the power supply line, and

in the event of abnormality in sensing of the power supply line voltage, the inverter is controlled in accordance with a neutral point voltage command corresponding to a target voltage of the power supply.

18. (Currently amended) A control program of an inverter system for driving a poly-phase motor according to claim ~~[[15]]~~ 17.

19. (Previously presented) An inverter system for driving a poly-phase motor claim 9, wherein

the alternating current motor is an alternating current motor used for a vehicle.

20. (Original) An inverter system for driving a poly-phase motor, comprising a high voltage power supply, an inverter with the high voltage power supply being connected to an input side and with an alternating current motor being connected to an output side, and a low voltage power supply connected to a neutral point of the alternating current motor, the inverter system controlling driving of the alternating current motor and transfer of electrical power between the high voltage power supply and the low voltage power supply by controlling driving of the inverter, wherein

switching of the inverter is performed by controlling the switching on and off of a switching element of the inverter based on a gate signal

obtained from comparison between a voltage command which is sinusoidal wave and carrier, and

the voltage command which is sinusoidal wave is limited within a predetermined range with regard to the carrier amplitude.

21. (Original) An inverter system for driving a poly-phase motor comprising a high voltage power supply, an inverter with the high voltage power supply being connected to an input side and with an alternating current motor being connected to an output side, and a low voltage power supply connected to a neutral point of the alternating current motor, the inverter system controlling driving of the alternating current motor and transfer of electrical power between the high voltage power supply and the low voltage power supply by controlling driving of the inverter, wherein driving control of the alternating current motor includes at least a stop mode and a power generation mode, and a feed-forward element is included in a neutral point voltage command in a transition state of these modes.

22. (Original) A control method of an inverter system for driving a poly-phase motor comprising a high voltage power supply, an inverter having the high voltage power supply connected to an input side and having an alternating current motor connected to an output side, and a low voltage power supply connected to a neutral point of the alternating current motor, in which driving of the alternating current motor and transfer of electrical power between the high voltage power supply and the low voltage power supply is controlled by controlling driving of the inverter, wherein switching of the inverter is performed by controlling on and off of

switching element of the inverter based on a gate signal obtained from comparison between a voltage command which is sinusoidal wave and carrier, and

the voltage command which is sinusoidal wave is limited within a predetermined range with regard to the carrier amplitude.

23. (Original) A control method of an inverter system for driving a poly-phase motor comprising a high voltage power supply, an inverter with the high voltage power supply being connected to an input side and with an alternating current motor being connected to an output side, and a low voltage power supply connected to a neutral point of the alternating current motor, in which driving of the alternating current motor and transfer of electrical power between the high voltage power supply and the low voltage power supply is controlled by controlling driving of the inverter, wherein driving control of the alternating current motor includes at least a stop mode and a power generation mode, and a feed-forward element is included in a neutral point voltage command in a transition state of these modes.

24. (Previously presented) An inverter system for driving a poly-phase motor according to claim 20, wherein the alternating current motor is an alternating current motor for a vehicle.